

AMENDMENTS TO THE SPECIFICATION:

Kindly replace the paragraph beginning at page 2, line 5, and ending at page 2, line 20, with the following amended paragraph:

According to one embodiment, a method of reducing tobacco-specific nitrosamines in cured tobacco, comprises raising the levels of antioxidants in tobacco prior to being cured, wherein the levels of antioxidants are raised by spraying a chemical solution onto an aerial part (*i.e.*, that part of the plant growing above ground) of a tobacco plant prior to harvesting and wherein the chemical solution effects an increase in the level of antioxidants in the tobacco plant. The chemical solution preferably includes a plant growth hormone such as ~~abscisic~~ abscisic acid (ABA) or analog thereof, a plant activator such as salicylic acid (SA) (commercially available as ACTIGARD®) or analog thereof, a plant activator such as a harpin protein containing product commercially available as MESSENGER®, a herbicide such as methyl viologen (MV) or analog thereof, a stress inducing agent such as hydrogen peroxide, sodium chloride (NaCl), or sulfur dioxide, or combinations thereof. Preferably, the analog of MV is Paraquat (a quaternary nitrogen herbicide widely used for weed control). Preferably, the tobacco plants are sprayed with the chemical solution in a single application or multiple applications about 1-3 weeks prior to harvest. Preferably, the tobacco is burley tobacco and the method further includes air curing the burley tobacco. The tobacco is preferably incorporated in a cigarette.

Kindly replace the paragraph beginning at page 2, line 21, and ending at page 3, line 7, with the following amended paragraph:

According to another embodiment, a method of reducing tobacco-specific nitrosamines in cured tobacco, comprises raising the levels of antioxidants in tobacco prior to being cured, wherein the levels of antioxidants are raised by soil treatment of tobacco plants prior to harvesting and wherein the soil treatment effects an increase in the level of antioxidants in the tobacco plant. The soil can be treated with a chemical solution which preferably includes a plant growth hormone such as ~~abscisic~~ abscisic acid (ABA) or analog thereof, a plant activator such as salicylic acid (SA) (commercially available as ACTIGARD®) or analog thereof, a plant activator such as a harpin protein containing product commercially available as MESSENGER®, a herbicide such as methyl viologen (MV) or analog thereof, a stress inducing agent such as hydrogen peroxide, sodium chloride, or sulfur dioxide, or combinations thereof. Preferably, the analog of MV is Paraquat (a quaternary nitrogen herbicide widely used for weed control). Preferably, the soil is treated in a single application or multiple applications about 1-3 weeks prior to harvest. Preferably, the tobacco is burley tobacco and the method further includes air curing the burley tobacco. The tobacco is preferably incorporated in a cigarette.

Kindly replace the paragraph beginning at page 6, line 8, and ending at page 6, line 10, with the following amended paragraph:

By the term "plant growth hormone is meant to include those plant growth

hormones which modulate the antioxidant level and thereby TSNA in the tobacco plant. Preferred plant growth hormones are ~~abscisic~~ abscisic acid (ABA) and jasmonic acid.

Kindly replace the paragraph beginning at page 6, line 18, and ending at page 6, line 26, with the following amended paragraph:

1.2 Abbreviations

ABA	abscisic <u>abscisic</u> acid
FRAP	Ferric-Reducing Antioxidant Power
HPLC	high performance liquid chromatography
MV	methyl viologen
NNK	4-(methylnitrosamino)-1-(3-pyridyl)- 1-butanone
NNN	N-nitrosornicotine
SA	salicylic acid
TSNA	tobacco-specific nitrosamines

Kindly replace the paragraph beginning at page 9, line 12, and ending at page 9, line 20, with the following amended paragraph:

Another embodiment of the present invention comprises spraying an effective amount of at least one plant growth hormone such as ~~abscisic~~ abscisic acid (ABA), or one or more of its more stable analogs, or jasmonic acid or one or more analogs thereof preferably onto the aerial part of topped tobacco plants several weeks or days before harvesting. Preferably, the spraying is performed one or more times in the field about 1-3 weeks before harvesting (*i.e.*, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14,

15, 16, 17, 18, 19, 20, 21, 22, 23, 24, or 25 days before harvesting). Due to the increase in antioxidant level in the treated tobacco leaves, a significant reduction of TSNAs can be obtained during curing of the tobacco leaves.

Kindly replace the paragraph beginning at page 10, line 7, and ending at page 10, line 13, with the following amended paragraph:

A further embodiment of the present invention comprises applying an effective amount of at least one plant growth hormone such as ~~abscisic~~ abscisic acid (ABA), or one or more of its more stable analogs or jasmonic acid or one or more analogs thereof onto the soil surrounding roots of topped tobacco plants several weeks or days before harvesting. Preferably, the soil treatment is performed one or more times in the field about 1-3 weeks before harvesting (*i.e.*, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, or 25 days before harvesting).